

| | |
|---------------|---|
| STRUCTURE | Silicon Monolithic Integrated Circuit |
| PRODUCTS | 3ch 75Ω driver |
| TYPE | BA7660FS |
| PACKAGE | Figure - 1 S S O P — A 1 6 P I N (Plastic Mold) |
| BLOCK DIAGRAM | Figure - 2 |

Features

- 1) A low consumption electric power movement
- 2) Output Mute circuit built-in
- 3) The power save circuit built-in
- 4) Output protection circuit built-in
- 5) Output coupling capacitor is the small capacity by sag compensation circuit built-in
- 6) The driver can have two load (each channel)
- 7) Input is directly connected with D/A converter output

Absolute Maximum Ratings (Ta=25°C)

| Item | Symbol | Rating | Unit |
|-----------------------------|--------|-----------------|------|
| Power supply Voltage | Vcc | 8 | V |
| Power Dissipation | Pd | 5 0 0 | mW |
| Operating Temperature Range | Topr | - 2 5 ~ + 7 5 | °C |
| Storage Temperature Range | Tstg | - 5 5 ~ + 1 2 5 | °C |

temperature exceeds Ta=25°C, the rated value is reduced by 5.0mW/°C. ※1 When absolute

Application example

The application circuit is recommended for use. Make sure to confirm the adequacy of the characteristics. When using the circuit with changes to the external circuit constants, make sure to leave an adequate margin for external components including static and transitional characteristics as well as dispersion of the IC. Note that ROHM cannot provide adequate confirmation of patents.

The product described in this specification is designed to be used with ordinary electronic equipment or devices (such as audio-visual equipment, office-automation equipment, communications devices, electrical appliances, and electronic toys). Should you intend to use this product with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

ROHM assumes no responsibility for use of any circuits described herein, conveys no license under any patent or other right, and makes no representations that the circuits are free from patent infringement.

■ Electrical characteristics 【Unless otherwise specified, Ta=25°C, VCC=5V】

| Item | Symbol | Limit | | | Unit | Condition |
|---------------------------|--------|-------|------|------|------|--------------------|
| | | Min. | Typ. | Max. | | |
| Circuit current | ICC | 11.4 | 22.8 | 34.2 | mA | No signal |
| Maximum output level | Vom | 2.6 | 3.0 | — | Vp-p | f=1kHz, THD=1% |
| Voltage gain | GV | 5.5 | 6.0 | 6.5 | dB | f=4.43MHz, 1Vp-p |
| Frequency characteristics | Gf | -1.0 | 0.0 | 1.0 | dB | f=7MHz/1MHz, 1Vp-p |
| Mute attenuation | MT | — | -60 | — | dB | f=4.43MHz, 1Vp-p |
| Mute change level "H" | VTHH | 3.5 | — | VCC | V | |
| Mute change level "L" | VTHL | 0 | — | 1.0 | V | |

■ PACKAGE

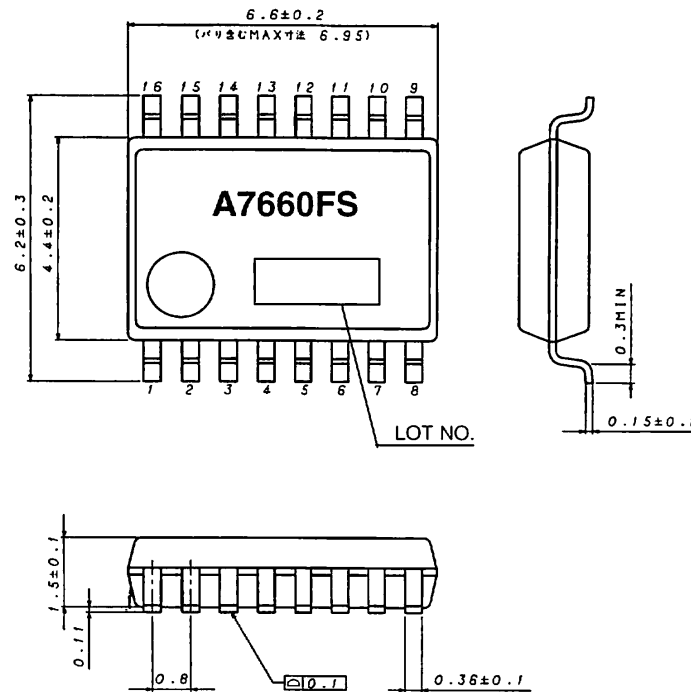


Figure 1 SOP16PIN (Plastic Mold)

■ BLOCK DIAGRAM

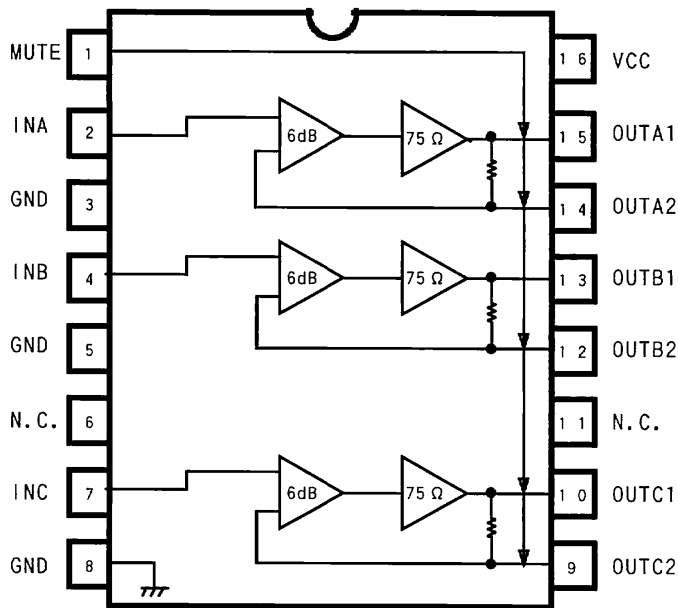


Figure 2

■ PIN Assignment

| PIN No. | PIN NAME |
|---------|----------|
| 1 | MUTE |
| 2 | INA |
| 3 | GND |
| 4 | INB |
| 5 | GND |
| 6 | N.C. |
| 7 | INC |
| 8 | GND |
| 9 | OUTC2 |
| 10 | OUTC1 |
| 11 | N.C. |
| 12 | OUTB2 |
| 13 | OUTB1 |
| 14 | OUTA2 |
| 15 | OUTA1 |
| 16 | VCC |

■Cautions on use

- (1) Numbers and data in entries are representative design values and are not guaranteed values of the items.
- (2) Although we are confident in recommending the sample application circuits, carefully check their characteristics further when using them. When modifying externally attached component constants before use, determine them so that they have sufficient margins by taking into account variations in externally attached components and the Rohm LSI, not only for static characteristics but also including transient characteristics.
- (3) Absolute maximum ratings
If applied voltage, operating temperature range, or other absolute maximum ratings are exceeded, the LSI may be damaged. Do not apply voltages or temperatures that exceeded the absolute maximum ratings. If you think of a case in which absolute maximum ratings are exceeded, enforce fuses or other physical safety measures and investigate how not to apply the conditions under which absolute maximum ratings are exceeded to the LSI.
- (4) GND potential
Make the GND pin voltage such that it is the lowest voltage even when operating below it. Actually confirm that the voltage of each pin does not become a lower voltage than the GND pin, including transient phenomena.
- (5) Thermal design
Perform thermal design in which there are adequate margins by taking into account the allowable power dissipation in actual states of use.
- (6) Shorts between pins and misinstallation
When mounting the LSI on a board, pay adequate attention to orientation and placement discrepancies of the LSI. If it is misinstalled and the power is turned on, the LSI may be damaged. It also may be damaged if it is shorted by a foreign substance coming between pins of the LSI or between a pin and a power supply or a pin and a GND.
- (7) Operation in strong magnetic fields
Adequately evaluate use in a strong magnetic, since there is a possibility of malfunction.

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.

Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available,
please contact your nearest sales office.

Please contact our sales offices for details ;

| | | |
|-------------------------|---------------------------|----------------------------|
| U.S.A / San Diego | TEL : +1(858)625-3630 | FAX : +1(858)625-3670 |
| Atlanta | TEL : +1(770)754-5972 | FAX : +1(770)754-0691 |
| Dallas | TEL : +1(972)312-8818 | FAX : +1(972)312-0330 |
| Germany / Dusseldorf | TEL : +49(2154)9210 | FAX : +49(2154)921400 |
| United Kingdom / London | TEL : +44(1)908-282-666 | FAX : +44(1)908-282-528 |
| France / Paris | TEL : +33(0)1 56 97 30 60 | FAX : +33(0) 1 56 97 30 80 |
| China / Hong Kong | TEL : +852(2)740-6262 | FAX : +852(2)375-8971 |
| Shanghai | TEL : +86(21)6279-2727 | FAX : +86(21)6247-2066 |
| Dilian | TEL : +86(411)8230-8549 | FAX : +86(411)8230-8537 |
| Beijing | TEL : +86(10)8525-2483 | FAX : +86(10)8525-2489 |
| Taiwan / Taipei | TEL : +866(2)2500-6956 | FAX : +866(2)2503-2869 |
| Korea / Seoul | TEL : +82(2)8182-700 | FAX : +82(2)8182-715 |
| Singapore | TEL : +65-6332-2322 | FAX : +65-6332-5662 |
| Malaysia / Kuala Lumpur | TEL : +60(3)7958-8355 | FAX : +60(3)7958-8377 |
| Philippines / Manila | TEL : +63(2)807-6872 | FAX : +63(2)809-1422 |
| Thailand / Bangkok | TEL : +66(2)254-4890 | FAX : +66(2)256-6334 |

Japan /
(Internal Sales)

| | | | |
|---|---|-----------------------|------------------------|
| Tokyo | 2-1-1, Yaesu, Chuo-ku, Tokyo 104-0082 | TEL : +81(3)5203-0321 | FAX : +81(3)5203-0300 |
| Yokohama | 2-4-8, Shin Yokohama, Kohoku-ku, Yokohama, Kanagawa 222-8575 | TEL : +81(45)476-2131 | FAX : +81(45)476-2128 |
| Nagoya | Dainagayo Building 9F 3-28-12, Meieki, Nakamura-ku, Nagoya, Aichi 450-0002 | TEL : +81(52)581-8521 | FAX : +81(52)561-2173 |
| Kyoto | 579-32 Higashi Shiokouji-cho, Karasuma Nishi-iru, Shiokoujiodori, Shimogyo-ku, Kyoto 600-8216 | TEL : +81(75)311-2121 | FAX : +81(75)314-6559 |
| (Contact address for overseas customers in Japan) | | | |
| Yokohama | | TEL : +81(45)476-9270 | FAX : +81(045)476-9271 |